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EXAMINER

NGUYEN, JENNIFER T

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/492,300	Applicant(s) AGANO, TOSHITAKA	
	Examiner Jennifer T. Nguyen	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 and 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to Amendment filed on 03/28/06.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 16, 17, 23, and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Simpson (Patent No. US 6,809,776).

Regarding claims 1 and 38, Simpson teaches a display device (500, fig. 5A), having:

at least two sets of luminance including an image maximum luminance for displaying an image (i.e., high-drive picture regions) and an ordinary maximum luminance for displaying non-image information (i.e., computer-related text), said ordinary maximum luminance being lower than said image maximum luminance (col. 7, lines 9-19 and col. 8, lines 23-26),

wherein said display device is operable to simultaneously display the image at the image maximum luminance and the non-image information at the ordinary maximum luminance and a visibility of the non-image information is not reduced when displayed at ordinary maximum luminance (col. 2, lines 16-39).

Regarding claim 17, Simpson teaches the display device receiving a control signal supplied externally to distinguish image and non-image information for display and adjusting brightness of the display based on the control signal (col. 4, line 57 to col. 5, line 15).

Regarding claims 16 and 23, Simpson teaches a display device, having: at least two sets of maximum luminance including an image maximum luminance (i.e., high-drive picture regions) for displaying an image and an ordinary maximum luminance for displaying non-image information (i.e., computer-related text), said ordinary maximum luminance being lower than said image maximum luminance (col. 7, lines 1-19 and col. 8, lines 23-26),

wherein said display device receives a control signal supplied externally to distinguish image and non-image information for display and adjusts brightness of the display based on the control signal, wherein the control signal determines a type of image signal received in the display device and the image maximum luminance is set to one of a first image maximum luminance and a second image maximum luminance, wherein said first image maximum luminance and the second image maximum luminance are different from each other and are different from the ordinary maximum luminance, and said image maximum luminance is set according to the control signal (col. 4, lines 15-56).

Claim Rejections - 35 USC § 103

4. Claims 2-7, 18, 20, 21, and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Patent No. US 6,809,776) in view of Ito (Patent No. US 6,144,064).

Regarding claims 2-4, 28, 29, and 31, Beetsen differs from claims in that he does not specifically teach a luminance switching unit has a selection unit which makes adjustment to the brightness of the display depending on the image maximum luminance in a case of display of only the image and makes adjustment to the brightness of display depending on said ordinary maximum luminance and the brightness of display depending on said image maximum luminance.

Ito teaches a luminance switching unit has a selection unit (2) which makes adjustment to the brightness of the display depending on the image maximum luminance (ELI and EL3) in a case of display of only the image and makes adjustment to the brightness of display depending on said ordinary maximum luminance (i.e., EL2) and the brightness of display depending on said image maximum luminance (col. 1, lines 50-61 of Ito). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the switching unit as taught by Ito in the system of Simpson in order to easily control the brightness of display.

Regarding claim 5, the combination of Simpson and Ito teaches that an entire display screen is adjusted to a brightness of display not higher than said ordinary maximum luminance in accordance with an operation using graphical user interface (col. 1, lines 50-61 of Ito).

Regarding claim 6, the combination of Simpson and Ito teaches adjustment of a brightness of display in relation to an ordinary maximum luminance and a maximum luminance is performed by adjustment of a light source (col. 1, lines 11-17 of Ito).

Regarding claim 7, Simpson teaches the non-image information comprises textual information (col. 7, lines 9-19).

Regarding claim 18, the combination Simpson of and Ito teaches a light source control unit (i.e., inverters 1-3) which controls current through each of the multiple light sources independently to increase brightness in display screen (col. 1, lines 50-61 of Ito).

Regarding claims 25 and 26, the combination of Simpson and Ito teaches brightness of a display of the non-image information at the ordinary maximum luminance is less than a brightness of a display of the image without any loss of gradation resolution of the non-image information (col. 1, lines 50-61 of Ito).

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Regarding claims 20, 21, 27, 30, 32, and 33, the combination of Simpson and Ito teaches the region of the display screen corresponds to one of the image and the non-image information and the another region of the display screen corresponds to another of the image and non-image information (col. 4, line 57 to col. 5, line 15 of Simpson).

5. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Patent No. US 6,809,776) in view Tew et al. (Patent No. US 6,232,963).

Regarding claims 8 and 9, Simpson differs from claims 8 and 9 in that it does not specifically teaches the image is displayed at a maximum luminance level for the display represented by n bits and wherein the non-image information is displayed at a maximum level represented by less than n bits or $n-3$ bits. Simpson teaches the image is displayed at a maximum luminance level and the non-image information is displayed at a maximum level which is lower than the maximum luminance level of the image.

Tew teaches greater bit-weights are display with more illumination than bit-planes having smaller bit-weights (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the bit-weights as taught by Tew in the system of Simpson in order to design a desired brightness level for display.

Regarding claim 10, the combination of Simpson and Tew teaches adjustment of brightness of display in relation to said ordinary maximum luminance and said image maximum luminance is performed by adjusting of light source for display (col. 1, lines 50-61 of Ito).

6. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Patent No. US 6,809,776) in view of Tew et al. (Patent No. US 6,232,963) and further in view of Saito et al. (Patent No. US 5,315,695).

Regarding claim 11, the combination of Simpson and Tew differs from claim 11 in that it does not specifically teaches adjustment of the light source comprises increasing or decreasing current through the light source.

Saito teaches the current amount to be supplied to the light source become greater, the light source emits more light so as to raise the luminance of the display (col. 4, lines 32-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adjustment of the light source as taught by Saito in the system of the combination of Simpson and Tew in order to control the brightness of the display efficiently.

Regarding claim 12, the combination of Simpson, Tew, and Saito teaches adjustment of brightness of display in relation to said ordinary maximum luminance and said image maximum luminance is performed by adjusting of light source for display (col. 1, lines 50-61 of Ito).

Regarding claim 13, the combination of Simpson, Tew and Saito teaches a light source control unit (i.e., inverters 1-3) which controls current through each of the multiple light sources independently to increase brightness in display screen (col. 1, lines 50-61 of Ito).

Regarding claims 14 and 15, combination of Simpson, Tew, and Saito teaches the display device receiving a control signal supplied externally to distinguish image and non-image information for display adjusting brightness of the display based on the control signal (col. 5, line 50 to col. 6, line 10 of Simpson).

7. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Patent No. US 6,809,776) in view of Iga et al. (Patent No. US 6,278,437).

Regarding claim 37, Simpson teaches a display device (500, fig. 5A), having:

at least two sets of luminance (50 and 55) including an image maximum luminance for displaying an image (i.e., high-drive picture regions) and an ordinary maximum luminance for displaying non-image information (i.e., computer-related text), said ordinary maximum luminance being lower than said image maximum luminance (col. 7, lines 9-19 and col. 8, lines 23-26).

Simpson differs from claim 37 in that he does not specifically teach "if a size ...visibility of said image".

However, Iga teaches if a size of said image being displayed is so small that there occurs a blank area in an image-assigned region, said blank area is rendered in black in order to enhance the visibility of said image (col. 12, lines 55-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the blank area is rendered in black as taught by Iga in the system of Simpson in order to reduce eye strain of viewer.

8. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Patent No. US 6,809,776) in view of Hoshi (Patent No. US 6,020,944).

Regarding claims 19 and 24, Simpson differs from claims 19 and 24 in that he does not specifically teach the image maximum luminance is substantially in the range of 400 cd/mz - 10,000 cd/mz and the ordinary maximum luminance is substantially in the range of 40 cd/mz - 400 cd/mz.

Hoshi teaches high luminance is about several thousands cd/m² and the lower luminance is substantially in the range of 80- 120 cd/mz (col. 2, lines 26-30). Therefore, it would have been

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obvious to obtain the range of the luminance level as taught by Hoshi in the system of Simpson in order to provide enough luminance to view the image accurately.

9. Claims 22 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Patent No. US 6,809,776) in view of Vara et al. (Patent No. US 6,063,030).

Regarding claims 22 and 36, Simpson teaches having a plurality of ordinary maximum luminance levels (col. 7, lines 1-19). Simpson differs from claims 22 and 36 in that he does not specifically teach a diagnostic apparatus connected to the display device.

Vara teaches a diagnostic apparatus connected to the display device (col. 5, lines 34-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the diagnostic apparatus as taught by Vara in the system of Simpson in order to perform accurate, bright display image and avoid stress on the viewer's, specially in the medical field.

10. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Patent No. US 6,809,776) in view of Ito (Patent No. US 6, 144,064) and further in view of Iwamoto et al. (Patent No. US 6,532,474).

Regarding claim 34, the combination of Simpson and Ito teaches all the limitations except a means for pointing shown in the display screen is at an image area or at a non-image area information area of the display screen.

Iwamoto teaches pen touch for pointing shown in the display screen is at an image area or at a non-image area information area of the display screen (col. 11, lines 36-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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incorporate the pointing means as taught by Iwamoto in the system of the combination of Simpson and Ito in order to control the operation of the device quickly.

11. Applicant's arguments with respect to claims 1-34 and 36-37 have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be


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reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned 571-273-8300.

information regarding the status of an application may be obtained from the Patent Application information Retrieval (PMR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-dgect.uspto.gov>. Should you have questions on access to the Private PMR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JNguyen

6/9/07



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